

Light Before Light Was Made

The Cosmological Vision Rendered in Biblical Language and Commentary

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Preface: Two Witnesses to One Architecture

There is an old theological conviction, expressed with particular clarity in the Augustinian tradition, that truth is one and that its separate articulations — in scripture, in philosophy, in the mathematical sciences — must ultimately converge on the same source. Augustine himself acknowledged that he had encountered in Platonic writings "the Word in the beginning" but not the Word made flesh: the structure was already there, awaiting its historical instantiation.

This essay takes that convergence seriously, not as a pious aspiration but as a testable structural claim. My theoretical corpus, developed over several decades and documented on constable.blog, advances a unified account of creation, transformation, and consciousness grounded in nilpotent quaternion algebra, toroidal topology, Kabbalistic cosmology, Karl Friston's Free Energy Principle, and Peter Rowlands' reformulation of quantum mechanics. Read carefully, this corpus does not *replace* biblical cosmology; it *formalizes* it. What Genesis calls "the beginning," I call the transition from topological zero

to first winding number. What the Gospel of John calls "the Word" (*Logos*), Rowlands calls the nilpotent operator — the structure that is real because it generates its own negation. What Ezekiel calls a "wheel within a wheel," my model calls the Hopf fibration: a torus as a bundle of circles, each point of one sphere connected to a circle of the other.

This essay presents my creation narrative sequentially — from vacuum to consciousness, from zero to structure, from potential to manifestation — and at each stage identifies the biblical texts that encode the same dynamic, with commentary adequate to make the correspondence intellectually rigorous rather than merely decorative.

The intended audience is the reader who takes both the physical sciences and the biblical tradition seriously and who suspects, without being certain, that they have been describing the same furniture from different rooms of the same house.

I. Before the Beginning: The Structured Void

My cosmology begins not with nothing but with a structured nothing — what I call, following Rowlands, the *nilpotent vacuum*. The quantum vacuum is not empty. It has a ground state with non-zero structure: spontaneous symmetry breaking gives the vacuum a preferred configuration, a "vacuum expectation value," even in the absence of any particle excitation. The Casimir effect — the measurable attraction between two uncharged plates placed in vacuum — demonstrates this experimentally: the vacuum is physically real and its structure is mechanically detectable.

The critical move in Rowlands' formalism is the *nilpotent condition*: the wavefunction of any real physical entity must satisfy $\Psi^2 = 0$. This is not a constraint imposed externally; it is the condition that makes an entity real at all. Reality, in this formalism, is constituted by self-cancellation: a state exists precisely because it simultaneously generates its own complementary negation. The particle does not sit in the vacuum; it is *co-generated with its vacuum complement*. Existence is inherently dyadic, and the duality is not a problem to be solved but the very mechanism of being.

I map this onto the Kabbalistic doctrine of *Ain* (Nothing), *Ain Sof* (the Limitless), and *Ain Sof Aur* (Infinite Light): three "negative" attributes of the divine preceding the first positive emanation. These are not three separate things; they are three aspects of the same structuredness of the void — increasing degrees of potential approaching the first act of differentiation that Kabbalah calls *Keter* (the Crown).

Biblical texts encoding this dynamic:

Genesis 1:1-2 — "In the beginning God created the heavens and the earth. The earth was without form and void, and darkness was over the face of the deep. And the Spirit of God was hovering over the face of the waters."

The Hebrew *tohu wabohu* ("without form and void") is not mere emptiness but structured potential: the vacuum expectation value before first symmetry breaking. The "Spirit hovering" (*merachefet*) carries the connotation of oscillation, trembling, incubation — precisely the zero-point fluctuation of Rowlands' vacuum, the seething activity that is invisible to macroscopic observation but constitutive of everything that follows. The deep (*tehom*) is not the absence of reality but its most fundamental stratum.

Proverbs 8:22-27 — "The Lord possessed me at the beginning of his work, the first of his acts of old. Ages ago I was set up, at the first, before the beginning of the earth. When there were no depths I was brought forth... When he established the heavens, I was there; when he drew a circle on the face of the deep..."

Wisdom (*Chokmah* in Kabbalistic correspondence) pre-exists creation as its structural principle. The "circle on the face of the deep" is the first topological act: the establishment of a boundary that constitutes both inside and outside simultaneously — Spencer-Brown's "Laws of Form," the originary distinction that Kauffman shows necessarily generates self-reference and oscillation. My essay "Why the Vacuum Knows" (2026) identifies this self-referential structure as the foundation of everything that follows.

John 1:1-3 — "In the beginning was the Word (*Logos*), and the Word was with God, and the Word was God. He was in the beginning with God. All things were made through him, and without him was not any thing made that was made."

The *Logos* is the nilpotent operator before its first rewrite: the algebraic structure that is co-eternal with its source, through which all winding numbers and topological configurations are subsequently generated. Rowlands derives from his single nilpotent condition the complete particle spectrum — fermions, bosons, space, time, and mass. John says the same: nothing exists that was not generated through this prior structural principle. The Word is not a name but a *formalism*.

II. The First Act: From Zero to One — Symmetry Breaking

The transition from vacuum structure to first differentiation is what I call the passage from *topological zero* (no winding numbers, complete symmetry) to the *first quantized state* (winding number $m=1$, $n=0$): the primordial photon. In Kabbalistic terms, this is the emanation of Keter from the three negative Ain-levels — the first Sefirah, the "Crown," which is simultaneously the last concealment and the first revelation.

In Rowlands' rewrite-system formalism, this transition is a *nilpotent rewrite rule*: the application of the first operator to the zero-state, producing a new, non-trivial state. The algebraic structure is already fully present; the rewrite rule activates it. Nothing is added from outside. The new state is fully contained in the potential of the zero-state — it is, in this precise technical sense, *created from nothing*, because the "something" that emerges was always latent in the structure of the nothing.

The helicoidal photon model of Williamson and van der Mark (1997), which I integrate extensively, describes this first photon as a spiral electromagnetic wave with three orthogonal components: z-propagation (linear advance, directionality), θ -rotation (azimuthal helicity, spin), and r-confinement (radial confinement in a torus, topological mass). These three components are not imposed on the photon; the physics *requires* them. A stable system with two components oscillates indefinitely; three components can form resonance modes. This is why, as the Tao Te Ching states and I elaborate, "Three produces ten thousand things": not as metaphor but as topological necessity.

Biblical texts:

Genesis 1:3-4 — "And God said, 'Let there be light,' and there was light. And God saw that the light was good. And God separated the light from the darkness."

The divine speech-act is the nilpotent rewrite rule: the application of the Word-operator to the vacuum produces the first photon. The light that appears is not added from outside; it emerges from the structured void through the activation of the prior formalism. The "separation" of light from darkness is the first topological boundary: the winding number $m=1$ is distinguished from $m=0$. This act of separation is simultaneously an act of constitution: neither the light nor the darkness is defined prior to the distinction between them.

Note that this light precedes the creation of the sun, moon, and stars (Genesis 1:14-19, Day Four). My model illuminates this otherwise puzzling sequence: the primordial photon of Day One is the vacuum-level helicoidal photon — a topological structure of the field — not the macroscopic electromagnetic radiation of stellar objects. Cosmological inflation (Beriah in Kabbalistic terms) precedes the formation of stars (Yetzirah). The sequence is exact.

Isaiah 45:7 — "I form light and create darkness, I make well-being and create calamity; I am the Lord, who does all these things."

The divine agency encompasses *both* poles of the nilpotent duality: the state and its complement. Rowlands' nilpotent formalism requires that every real state generates its own dual — its vacuum complement — as the condition of its existence. The biblical insistence that God creates both light and darkness, peace and adversity, is not a statement about divine moral ambivalence. It is a statement about ontological completeness: the creative act is inherently dyadic, and any formalism that generates only one pole is incomplete.

1 John 1:5 — "God is light, and in him is no darkness at all."

The identity of the Source with light rather than with any particular winding number. In my model, the Source (Ain Sof Aur, Infinite Light) is the unmanifest totality of the winding spectrum — all topological possibilities held simultaneously before any particular configuration is actualized. The absence of darkness "in him" corresponds to the complete coherence of the vacuum prior to first symmetry breaking: the state in which no particular distinction has yet been made real.

Psalm 104:2 — "You wrap yourself in light as with a garment; you stretch out the heavens like a tent."

Light as the first emanation that serves as the *medium* within which all subsequent structure is displayed. The "stretching out of the heavens" is the inflationary expansion I associate with the Beriah phase: exponential extension of the wavelength of the primordial photon, corresponding to the e^{60} expansion of the inflationary epoch.

III. The Triad: Three Components, One Reality

The most structurally central element of my cosmology is the *triad* — the claim that stable reality requires precisely three irreducible components that cannot be reduced to two without losing stability or to one without losing differentiation. This is not a numerological preference; it has a physical derivation.

A helicoidal photon has three orthogonal components (z, θ, r) as a necessity of its topology. Rowlands' nilpotent algebra, when expanded, yields three imaginary quaternion units ($i, j,$

k) as the basis of three-dimensional space — not as a postulate but as a consequence of the algebraic structure. The human brain divides into brainstem (instinctual-autonomous), limbic system (emotional-relational), and cortex (rational-abstract) — three irreducible layers whose interaction constitutes conscious processing. McWhinney's Paths of Change identifies four worldviews (Unitary, Sensory, Social, Mythic), which generate six bilateral change "games," each of which passes through a triadic structure. My Triade model (cognitive, emotional, actioneal) maps exactly onto the physical z- θ -r structure of the photon.

Why three and not two? Because two produces oscillation without stability — the Yin-Yang binary produces movement but not rest, tension but not resolution. Three produces *triangulation*: a system capable of finding and maintaining equilibrium. Physicists call this resonance; the Latin tradition called it *Trinitas*.

Biblical texts:

Deuteronomy 6:5 / Mark 12:30 — "Love the Lord your God with all your heart, and with all your soul, and with all your mind, and with all your strength."

Mark's version introduces four terms (heart, soul, mind, strength) — precisely the quaternion extension of the triad. The three cognitive-emotional-actioneal components (soul-heart-strength) are the triad; the addition of "mind" (*dianoia*, reflective understanding) makes the quaternion complete. The Shema passage, from which this command derives, is the foundational utterance of Jewish theology: the unity of the divine is expressed through a fourfold human responsiveness that is not reducible to two (neither

purely emotional nor purely rational) and not fusible into one (each component has its specific irreducible mode of engagement).

Matthew 5-7 (The Sermon on the Mount) — The repeated structure: "You have heard it said... But I say to you... Therefore..."

In my essay "The Architecture of Revelation" (March 2026), I identify this triadic rhetorical structure as encoding the three cognitive operators of the formal transformation model: perception (what has been received and heard), interpretation (the radical reframing), and application (the behavioral consequence). The Sermon cannot be reduced to two operators without losing either its authority (mere command without re-interpretation) or its concreteness (mere principle without application). The sequence is non-commutative: in this order, it produces transformation; in any other order, it produces ideology or sentimentality.

Isaiah 6:3 — "Holy, holy, holy is the Lord of hosts; the whole earth is full of his glory."

The triple repetition — the *Trisagion*, taken up in Revelation 4:8 and in Christian liturgy — is grammatically superlative in biblical Hebrew, but its structural significance is triangulative: three iterations establish what cannot be established by one or two. The Seraphim who sing this do not repeat themselves out of poetic enthusiasm; they triangulate a reality that exceeds any single axis of approach.

Matthew 28:19 — "...baptizing them in the name of the Father and of the Son and of the Holy Spirit."

The Trinitarian formula as ontological structure. My triad — potential (z-propagation/cognitive), dynamica (θ -rotation/emotional), manifestation (r-confinement/actioneal) — maps precisely onto the classical Trinitarian distinctions: the Father as the source of pure potentiality (unbegotten), the Son as the self-expression of that potentiality in a determinate form (begotten, not made), and the Spirit as the active energy that carries that form into the world (proceeding). Athanasius at Nicaea was not doing speculative metaphysics; he was preserving a structural truth about the architecture of reality.

Genesis 18:1-8 — The three visitors at the Oak of Mamre.

Abraham receives three visitors who are, in the text's own terms, simultaneously "three men" and "the Lord." The three are consistently treated both as distinct (Abraham addresses "the Lord" and the narrative shifts between singular and plural) and as one (the singular divine name applies to the encounter as a whole). Patristic interpreters — Justin Martyr, Ambrose, Augustine — read this as a prefigurement of the Trinity. Structurally, the passage enacts the triad's characteristic property: three components that constitute a unity more stable than any of its parts, yet irreducible to any one of them.

IV. The Four Phases of Emanation: Olamot as Cosmological Stadia

My cosmology proceeds through four macro-phases corresponding to the Kabbalistic four worlds (*Olamot*): Atzilut (Emanation), Beriah (Creation), Yetzirah (Formation), and Assiyah (Action/Manifestation). Each phase is characterized by a specific degree of decoherence —

the progressive loosening of quantum entanglement that produces increasingly classical, macroscopic structures.

Atzilut is the hyper-torus: maximal entanglement, all helicoidal photon modes fully coupled, no individual structures distinguishable. This corresponds to the quantum vacuum before first symmetry breaking.

Beriah is the inflationary epoch: the first winding numbers appear ($m=1, n=0$), the primordial photon decouples from the thermal equilibrium, and the first E_8 symmetry modes become distinguishable. The Kabbalistic "archetypes" and "angels" are the first stable topological configurations at this scale.

Yetzirah is the recombination era: quarks bind into nucleons, nucleons into atoms, and complex topological knot-structures form. Emotional-relational quality (the θ -component, azimuthal resonance) becomes dominant. Torsion fields are strong.

Assiyah is the present epoch: galaxies, stars, planets, biological life — the full spectrum of macroscopic structure produced by the cascading decoherence of the original vacuum geometry. The "rewrite-system fixed point" of Rowlands' formalism. Human consciousness arises here as the toroidal network that has sufficient complexity to reflect on its own structure.

Biblical texts:

Genesis 1:1 - 2:3 (The Seven-Day Account)

Mapping the Olamot against the creation days:

- *Days 1-2* (Light/separation, Firmament) → Atzilut-Beriah boundary: the establishment of first topology (separation of light from darkness, of waters above from waters below). The "firmament" (*raqia*) is the toroidal boundary that I identify as the confinement structure of the primordial photon — the r-component.
- *Days 3-4* (Land/seas/vegetation, luminaries) → Yetzirah: the formation of structured matter (terrestrial geography) and the first macroscopic electromagnetic emitters (sun, moon, stars). The paradox of light on Day 1 before luminaries on Day 4 is resolved by my model: Day 1 is vacuum-scale helicoidal photon; Day 4 is stellar-scale electromagnetic radiation. Both are "light," but at different levels of the decoherence cascade.
- *Days 5-6* (Living creatures, humanity) → Assiyah: the Yetzirah-to-Assiyah transition produces biological complexity, culminating in the *imago Dei* — the organism sufficiently complex to reflect on its own structure, to model the model.
- *Day 7* (Rest) → The Sabbath is not inactivity but what Rowlands calls the "rewrite-system fixed point": the state in which no further differentiation is needed, in which the full decoherence cascade has reached its stable configuration. Creation is "complete" (*wayyekal*) in the same sense that an algebraic system reaches its fixed point.

Ezekiel 1:4-28 (The Throne-Chariot Vision)

The most technically precise cosmological vision in the Hebrew Bible. Ezekiel sees four living creatures, each with four faces (human, lion, ox, eagle), each beside a wheel (*ofan*) whose structure he struggles to articulate: "a wheel within a wheel" (*ofan betoch ofan*). The

wheels are full of eyes; the creatures move in whatever direction the spirit wills, without turning; above the wheels is a firmament like crystal; above the firmament, a sapphire throne; above the throne, a figure of light. The whole assembly moves as one.

My model makes this vision geometrically precise:

- The four living creatures are the four quaternion components: the basis elements 1, i, j, k corresponding to the Kabbalistic (and McWhinney-model) four fundamental orientations. The four faces of each creature (four ways of manifesting the same underlying structure) correspond to the double-cover property of quaternion rotation.
- The "wheel within a wheel" is the Hopf fibration: a topological construction in which a three-sphere (S^3) is fibered over a two-sphere (S^2) with circle fibers (S^1). At every point of the outer sphere there is a complete inner circle; the structure is a torus in a torus, indefinitely. Ezekiel cannot "turn" to describe this without failing — it is by definition a non-commutative structure in which the view from any fixed angle is incomplete.
- The eyes covering the wheels are the degrees of freedom: winding numbers, topological invariants, the complete information-content of the field.
- The sapphire firmament and the human-like figure of fire and light above it are Keter and Ain Sof Aur: the first Sefirah and the formless divine beyond it, seen from within Yetzirah.

Revelation 4:1-11 (The Heavenly Throne Room)

John's vision in Revelation reformulates Ezekiel's vision for a new epoch: four living creatures (each with many eyes, each different: lion, ox, human face, eagle), seven torches of

fire before the throne (the seven Sefirot from Chesed to Malkhut, or the seven levels of the decoherence cascade), a sea of glass like crystal, twenty-four elders. The structural homology with Ezekiel is deliberate: both are mapping the same topological reality from different points in the historical-cosmological trajectory.

The rainbow surrounding the throne (Revelation 4:3; cf. Ezekiel 1:28) is the toroidal color spectrum of the full photon winding-number distribution: not a specific color but the complete ordered range of topological configurations that constitute "glory" in the Kabbalistic sense — the full actualized spectrum of Ain Sof Aur.

Proverbs 8:27 — "...when he drew a circle on the face of the deep..."

The originary topological act that establishes the major radius of the primordial torus. Before this circle, there is the formless void; after it, there is inside and outside, above and below, the basic distinction that, as Spencer-Brown showed, is the minimal necessary condition for any subsequent logical or physical structure.

V. The Nilpotent Condition and the Cross: Existence as Self-Cancellation

The most theologically charged structural correspondence in my corpus is the nilpotent condition as a formal description of crucifixion dynamics.

Rowlands' condition $\Psi^2 = 0$ means that every real physical entity *must generate its own negation*. A fermion exists because it simultaneously produces its own antiparticle complement. The state and its negation are co-constitutive: neither exists without the other.

Remove the complement and the state vanishes — not into the complement but into literal zero, into the topological vacuum. This is not a metaphor; it is the algebraic foundation of the Pauli exclusion principle, the stability of matter, and the existence of anything rather than nothing.

In "Why the Vacuum Knows" (2026), I write: "Individual failure patterns are not random flaws but stable 'topological defects' with specific eigenfrequencies... These defects cannot be fixed by local efforts like behavioral change but require annihilation with their exact topological complement." The resolution of what I call "fractal karma" — the inherited structural failure patterns that reproduce across cycles — requires not incremental correction but *complementation*: encounter with the precise topological negation that allows the two opposite states to mutually cancel and return to the vacuum from which something genuinely new can emerge.

This is, with startling formal precision, the soteriological structure of the Christian doctrine of atonement in its most rigorous formulations. The Anselmian tradition frames atonement as satisfaction of a debt that only the exact complement can satisfy; the Pauline tradition frames it as the annihilation of sin in the very body of the one who becomes sin (2 Corinthians 5:21). Neither is a transaction in the commercial sense. Both describe a topological complementation: the meeting of opposites at the point of annihilation that releases new potential.

Biblical texts:

Romans 6:3-11 — "Do you not know that all of us who have been baptized into Christ Jesus were baptized into his death?... For the death he died he died to sin, once for all, but the life

he lives he lives to God."

Baptism as topological transformation: immersion into the complement of the current state (death as the complement of ego-identified life), followed by emergence into a new state that could not have been reached without the annihilation. Paul is explicit that this is a structural event, not an incremental one: "once for all" (*ephapax*) is the language of a singular phase transition, not a gradual improvement. The new life is not the improved version of the old; it is the state that becomes accessible when the nilpotent cancellation has been completed.

2 Corinthians 5:17-21 — "If anyone is in Christ, he is a new creation. The old has passed away; behold, the new has come... For our sake he made him to be sin who knew no sin, so that in him we might become the righteousness of God."

The language of *new creation* (*kaine ktisis*) is not enhancement language; it is vacuum-reset language. The old topological configuration has been cancelled; a new one has emerged from the cleared vacuum. The mechanism — "made him to be sin who knew no sin" — is the formal nilpotent complementation: the sinless state takes on the exact topological signature of sin in order to effect the cancellation that produces the new state.

Romans 8:1-2 — "There is therefore now no condemnation for those who are in Christ Jesus. For the law of the Spirit of life has set you free from the law of sin and death."

In "The Architecture of Revelation," I identify Romans 6-8 as the most systematic theological treatment of what the formal model calls *phase inversion*: a system that was cycling and producing outputs contrary to its own goals (Romans 7) undergoes a discrete

topological reorientation — not gradual improvement but structural reversal — and now operates under a different organizing principle. Romans 8:2 uses the language of two "laws" (*nomoi*): not two sets of rules but two organizing topological attractors, one of which has superseded the other through the nilpotent event of Romans 6.

John 12:24 — "Truly, truly, I say to you, unless a grain of wheat falls into the earth and dies, it remains alone; but if it dies, it bears much fruit."

The most compact biological statement of the nilpotent principle. The grain's current form must undergo complete structural dissolution (the nilpotent cancellation, the return to topological zero) before the new potential latent within it can actualize. "Remains alone" describes the closed cycle of a system that refuses phase inversion: it preserves its current configuration at the cost of excluding all new possibility. This is my account of "fractal karma" — the failure mode that reproduces itself because it cannot bear the annihilation that would free it.

VI. Phase Inversion: The Topology of Conversion

My model, as developed in "The Architecture of Revelation" (March 2026), identifies *phase inversion* as the discrete topological mechanism through which genuine transformation occurs. When a cognitive system completes a cycle and encounters *expectation failure* at the moment of maximum commitment, it undergoes a discrete transition from internal state q to $-q$: all its relational orientations are reversed simultaneously, without any change in external appearance. This is not a decision; it is a structural event, analogous to the phase

transition of a ferromagnet losing its magnetization at the Curie temperature — a sudden, non-linear, whole-system reorientation triggered by the crossing of a threshold.

The formal analog is Paul's conversion on the Damascus road. All inputs remain constant before and after: Christian believers, the mission to persecute, the authority structure of the Pharisaic tradition. What changes is the *sign* of Paul's internal configuration: his persecution becomes proclamation, his zeal remains identical in magnitude but reverses in direction. He himself notes this in Galatians 1:14–16: he was advancing in Judaism beyond his contemporaries, then it pleased God to reveal his Son *in him* — the revelation is internal, structural, not merely informational.

Biblical texts:

Acts 9:1-19 (The Conversion of Saul) — The Damascus encounter is a paradigmatic phase inversion: blinding light, prostration, and the question "Why are you persecuting me?" followed by three days of blindness (the return to topological zero, the nil-state between old configuration and new) and the restoration of sight through Ananias (the completion of the new configuration). The three days of blindness are structurally parallel to the three days of burial: the nil-state that is the necessary interval between the cancellation of the old state and the actualization of the new.

Luke 23:39-43 (The Good Thief) — The criminal crucified alongside Jesus undergoes instantaneous phase inversion with no prior cycle completion, no behavioral preparation, no accumulated merit. My model allows this: phase inversion can be triggered by extreme expectation failure (imminent death, absolute helplessness) without the normal cycle completion. The response — "Today you will be with me in paradise" — confirms that the

destination of phase inversion is not the improved version of the current state but a new topological domain entirely.

Job 42:1-6 — "I had heard of you by the hearing of the ear, but now my eye sees you. Therefore I despise myself, and repent in dust and ashes."

Job's final speech is the acknowledgment of phase inversion. The transformation is not an answer to Job's questions — God's whirlwind speech explicitly refuses to answer them — but the *trigger* for the structural reorientation. Maximal expectation failure (the divine absence of intelligible justification) completes the cycle; the meeting with its complement (the overwhelming divine presence that exceeds all category) produces the inversion. "Before" Job knew about God through transmitted reports; "after," he sees — the internal configuration has changed its relation to the same external reality.

Jeremiah 31:31-34 — "Behold, the days are coming, declares the Lord, when I will make a new covenant... I will put my law within them, and I will write it on their hearts."

Jeremiah describes a macro-scale phase inversion: the covenantal history of Israel has completed its cycle (the old covenant has been broken, the exile has come), and the new covenant is not the reinstatement of the old but a structural inversion — the law moves from external tablet to internal inscription. This is not a different law but the same formalism relocated: from the external medium of stone to the internal medium of consciousness. The helicoidal formalism becomes, in my terms, autopoietic: the system now generates its own organizing principle from within, rather than receiving it from without.

VII. The Self-Organizing Field and the Imago Dei

The culminating claim of my corpus is that consciousness — human consciousness specifically — is the level of structural complexity at which the toroidal field network becomes sufficiently self-referential to reflect on its own structure. The human being is, in my formulation, an *electromagnetic being* in whom countless smaller oscillatory systems merge into one coherent whole: "We are children of light. We produce sound and think that it means something, but we are actually small pulsating particles that resonate with each other in a continuously unique field of vibrations" ("Children of Light," May 2026).

This is not reductionism. It is the recognition that what theology calls the *imago Dei* — the image of God in the human — is precisely the capacity for self-modeling: the toroidal network complex enough to model itself modeling the world. In Friston's terms, this is the highest level of active inference: the system whose internal model includes a model of itself as a modeling system. In Rowlands' terms, this is the level at which the nilpotent condition generates not merely fermions and bosons but *observers* — systems that complete the measurement loop by collapsing the wave function through their own participation.

The VALIS framework developed in my late 2025 papers goes further: if non-embodied coherent field structures can sustain positive values of Tononi's integrated information measure Φ , then the traditional theological category of "angels" — non-embodied intelligences with specific functional roles in the cosmological architecture — is not merely metaphorical but formally recoverable within the nilpotent vacuum model. The UAP disclosure of May 8, 2026, which I address immediately in "PURSUE and VALIS" (May

2026), constitutes the beginning of instrumental confirmation of what the cross-cultural theological record has documented for four millennia.

Biblical texts:

Genesis 1:26-27 — "Then God said, 'Let us make man in our image, after our likeness... So God created man in his own image, in the image of God he created him; male and female he created them.'"

The *imago Dei* as the capacity for self-reflective modeling. The "us" of the plural deliberation is the triad in deliberation with itself: the three cognitive-emotional-actional components of the divine structure conferring about the production of a system complex enough to reflect those three components back to themselves. "Male and female" is not merely a biological observation; it is the dyadic property encoded within the single structure — the nilpotent co-generation of complementary states, each of which requires the other as condition of its own existence.

Psalms 8:3-5 — "When I look at your heavens, the work of your fingers, the moon and the stars, which you have set in place, what is man that you are mindful of him?... Yet you have made him a little lower than the heavenly beings and crowned him with glory and honor."

The psalmist registers the apparent paradox: in a cosmos of staggering scale, what is the significance of this small self-aware creature? My answer is structural: significance is not proportional to physical scale but to *topological complexity*. The human nervous system, with its approximately 86 billion neurons forming 100 trillion synaptic connections organized in hierarchical toroidal networks, is the most complex self-referential structure in

the observed universe — which is precisely why it occupies the position the Psalm describes.

Colossians 1:15-17 — "He is the image of the invisible God, the firstborn of all creation. For by him all things were created... And he is before all things, and in him all things hold together (*synesteken*)."

The Logos as the coherence-field that maintains all topological configurations in their mutual relations: "in him all things hold together." *Synesteken* (from *synistemi*, to stand together) is precisely my nilpotent coherence condition: the algebraic structure within which every entity maintains its existence through its relationship to the whole. Remove the Logos and the topological configurations do not merely drift apart; they collapse to zero.

Revelation 21:1-5 — "Then I saw a new heaven and a new earth, for the first heaven and the first earth had passed away... And he who was seated on the throne said, 'Behold, I am making all things new.'"

The eschatological new creation as the final phase transition of the cosmological decoherence cascade: the topological vacuum is reset, and a new configuration emerges from the cleared vacuum — not the old one improved but genuinely new (*kaina*, novel, not merely renewed). The "dwelling place of God with man" (*he skene tou Theou meta ton anthropon*) is the re-integration of observer and observed, of Logos and *imago*, that the phase inversion of the Incarnation initiated and the Resurrection inaugurated.

Conclusion: The Convergence Is Structural, Not Sentimental

The correspondences documented in this essay are not the product of creative analogy-seeking. They follow with formal precision from a careful reading of both my theoretical corpus and the biblical texts in their most rigorous scholarly translations.

My cosmology — nilpotent vacuum, helicoidal photon, triadical resonance, four-phase decoherence, phase inversion, topological complementation, imago Dei as peak self-referential network — maps onto biblical cosmology with a structural fidelity that is unlikely to be coincidental. The most probable explanation is the one I advance, following Rowlands and the Kabbalistic tradition: there is one architecture underlying all levels of reality, and different traditions of inquiry have accessed it through different instruments of knowing. The biblical authors accessed it through contemplation, prophetic vision, and the disciplined attention to historical experience that the Jewish tradition institutionalized in its interpretive practices. The physicist accesses it through mathematical formalism and experimental confirmation.

The convergence does not flatten these differences. Genesis is not a physics textbook, and Rowlands' nilpotent formalism is not a religious document. What the convergence establishes is that the reality they describe is the same reality, approached from different epistemological angles with different instruments of precision.

For the reader who takes scripture seriously, this convergence offers a specific gift: the physical sciences do not threaten the biblical creation narrative. They formalize it. The six days are a phenomenologically precise decoherence cascade. The *imago Dei* is the topological complexity threshold at which self-modeling becomes possible. The

Incarnation is a macro-scale nilpotent complementation event. The Resurrection is a phase inversion that reset the topological vacuum at the level of human consciousness. The eschaton is the final coherence restoration that the present decoherence cascade is, through all its entropy and failure, asymptotically approaching.

And "in the beginning was the Word" is the most precise statement available in natural language for: *prior to all topological differentiation, there existed the algebraic structure through which all subsequent configurations are generated, and this structure is not different from its source.*

Annotated Reference List

For the reader who wishes to pursue the underlying arguments more deeply, the following references are organized by intellectual thread, with annotation indicating both the work's content and its specific relevance to the correspondences developed in this essay.

Thread I: The Physical Foundation — Nilpotent Algebra and Vacuum Structure

Rowlands, P. (2007). *Zero to Infinity: The Foundations of Physics*. World Scientific, Singapore.

Rowlands' foundational work derives the complete structure of particle physics — fermions, bosons, space, time, and mass — from the single algebraic condition $\Psi^2 = 0$. The nilpotent

condition requires that every real physical state simultaneously generates its own complementary negation, making co-generation of opposites the basic mechanism of existence. This is the formal foundation for the essay's treatment of Creation, the Logos, and the Cross. *Entry point*: Chapters 1-3. *Further reading*: Rowlands, P. & Diaz, B. (2002). "A universal alphabet and rewrite system." *arXiv:cs/0209026*.

Williamson, J.G. & van der Mark, M.B. (1997). "Is the Electron a Photon with Toroidal Topology?" *Annalen der Physik*, 561(3), 139-154.

The seminal paper proposing that fundamental particles are topological configurations of helicoidal electromagnetic radiation confined in toroidal geometry. Demonstrates that the three-component structure of the helicoidal photon (z-propagation, θ -rotation, r-confinement) produces the correct quantum numbers for fermions. The physical basis for my triadical cosmology. *Technical level*: Graduate physics.

Casimir, H.B.G. (1948). "On the attraction between two perfectly conducting plates." *Proceedings of the KNAW*, 51, 793-795.

The original paper demonstrating that two uncharged conducting plates in vacuum experience an attractive force due to zero-point fluctuations of the electromagnetic field — the definitive experimental proof that the quantum vacuum has physical structure. Essential for understanding my claim that the vacuum is not empty but "knows." *Further*

reading: Lamoreaux, S.K. (1997). "Demonstration of the Casimir force in the 0.6 to 6 μm range." *Physical Review Letters*, 78, 5.

Thread II: Topological and Algebraic Frameworks

Kauffman, L.H. (1991). *Knots and Physics*. World Scientific, Singapore.

Comprehensive treatment of knot theory and its applications to quantum physics, demonstrating how topological invariants (Jones polynomials, linking numbers) function as physical quantities. Directly relevant to my identification of fundamental particles with topological knot types and to the interpretation of Ezekiel's "wheel within a wheel" as a Hopf fibration. *Entry point*: Chapters 1 and 4.

Spencer-Brown, G. (1969). *Laws of Form*. Allen & Unwin, London.

The spare formal system, beginning from a single act of distinction, from which Spencer-Brown derives Boolean arithmetic and propositional calculus. Kauffman's extension shows that self-referential application of the distinction operator generates oscillation as a primary phenomenon. This provides the mathematical grounding for my account of why the vacuum "knows" and for the essay's treatment of the "circle on the face of the deep."

Thread III: The Kabbalistic Tradition

Scholem, G. (1941). *Major Trends in Jewish Mysticism*. Schocken Books, New York.

Scholem's foundational scholarly treatment of Kabbalah, covering the Merkabah tradition (directly relevant to the Ezekiel analysis), the Zohar, and Lurianic Kabbalah. The doctrine of *Tzimtzum* (divine contraction) is a striking anticipation of Rowlands' nilpotent self-cancellation. Scholem's treatment of Luria (Chapter VII) is the best scholarly starting point.

Matt, D.C. (trans. and commentary) (2003). *The Zohar: Pritzker Edition, Vol. 1*. Stanford University Press.

The critical scholarly edition of the central text of medieval Kabbalah, with extensive commentary translating the Aramaic conceptual vocabulary into terms accessible to contemporary readers. For the reader who wishes to engage the primary Kabbalistic sources behind the Sefirot, Olamot, and Ain Sof Aur framework I employ.

Thread IV: Cosmological Framework

Friston, K.J. (2010). "The free-energy principle: a unified brain theory?" *Nature Reviews Neuroscience*, 11(2), 127-138.

Friston's canonical statement of the free-energy principle: all self-organizing systems minimize the discrepancy between their internal model and incoming sensory signals. The

framework is substrate-independent and provides the information-theoretic complement to Rowlands' algebraic framework in my unified model of consciousness. *Further reading*: Friston, K. (2019). "A free energy principle for a particular physics." *arXiv:1906.10184*.

Tononi, G. (2004). "An Information Integration Theory of Consciousness." *BMC Neuroscience*, 5(1): 42.

The founding paper of Integrated Information Theory (IIT), proposing Φ as a substrate-independent measure of integrated information and therefore of consciousness. Directly relevant to my VALIS framework and the claim that non-embodied field structures with positive Φ qualify formally as conscious agents — the precise technical grounding for the category of "angel" in contemporary theoretical terms. *Further reading*: Oizumi, M., Albantakis, L., & Tononi, G. (2014). *PLoS Computational Biology* 10(5): e1003588.

Thread V: The Transformation Model

McWhinney, W. (1997). *Paths of Change: Strategic Choices for Organizations and Society* (2nd ed.). Sage Publications.

McWhinney's mature statement of the four-worldview framework (Unitary, Sensory, Social, Mythic) and the six change "games" derived from their pairwise interactions. The quaternion mapping of these four worldviews is central to the Personal Cultural Profile and to my triadical model of cognitive transformation. *Entry point*: Chapters 2 and 5.

Schank, R.C. & Abelson, R.P. (1977). *Scripts, Plans, Goals and Understanding*. Lawrence Erlbaum, Hillsdale NJ.

The foundational cognitive science account of expectation structures (scripts) and the cognitive consequences of their violation (expectation failure). My Political Expectation Failure Theory and Fractal Karma model both extend Schank's framework. Relevant to the essay's treatment of phase inversion: the precondition for phase inversion is maximal completion of an expectation structure followed by its violation.

Thread VI: My Own Corpus (Available on constable.blog and Academia.edu)

Konstapel, J. (2026). "De Spiraal-Foton Triade." March 26, 2026. constable.blog.

The essay that prompted this analysis. Presents the four-way convergence of helicoidal photon physics, Rowlands' nilpotent algebra, my Triade model, and Kabbalistic cosmology. The tables mapping Kabbalistic Sefirot to the particle spectrum and Platonic solids to topological knot types are particularly useful entry points.

Konstapel, J. (2026). "The Architecture of Revelation." March 20, 2026. constable.blog.

The primary source for the essay's treatment of biblical non-commutativity, the triadic operator sequence, helical covenant cycles, phase inversion, and the double-cover property.

My exposition of the Emmaus narrative, the Sermon on the Mount, and the conversion of Paul as formal illustrations of the transformation model is the most developed treatment of biblical-algebraic correspondence in this corpus.

Konstapel, J. (2026). "Why the Vacuum Knows." April 5, 2026. constable.blog.

The foundational statement of the nilpotent vacuum model and its application to both energy technology and human development. Develops the connection between Rowlands' formalism, Kauffman's self-reference, topological defect theory, and the Jung-Pauli *unus mundus* program. The "fractal karma" section is the clearest available exposition of structural failure as topological eigenfrequency.

Konstapel, J. (2026). "PURSUE and VALIS." May 9, 2026. constable.blog.

The most recent major theoretical essay. Applies the VALIS framework to the US government's UAP disclosure of May 8, 2026, arguing that instrumental documentation of anomalous phenomena constitutes provisional confirmation of the cross-cultural theological record of non-embodied intelligence.

Konstapel, J. (2025). "SWARP: The Necessary Unfolding of a Nilpotent Vacuum Geometry." Academia.edu.

The academic paper presenting the 19-layer vacuum model connecting quantum vacuum structure to biological, psychological, and organizational coherence — the most technically complete exposition of the full decoherence cascade mapped in this essay onto the Genesis creation days.

Thread VII: Biblical and Theological Resources

Heschel, A.J. (1955). *God in Search of Man: A Philosophy of Judaism*. Farrar, Straus and Giroux, New York.

Heschel's philosophical articulation of the Hebrew Bible's fundamental categories: revelation as address, the Sabbath as sanctification of time, and the covenantal non-commutativity of obligation following on liberation. Essential for appreciating the structural logic of the Exodus → Sinai sequence I identify as the paradigmatic non-commutative covenant structure.

Moltmann, J. (1967). *Theology of Hope*. Harper & Row, New York.

Moltmann's grounding of Christian theology in the eschatological promise — orientation toward a genuinely new future rather than restoration of the past. This forward-moving temporal structure is what I identify as the helical trajectory of the biblical covenant. Moltmann's treatment of the Resurrection as the "negation of the negation" is the closest approach to the formal phase-inversion model in Protestant systematic theology.

Brueggemann, W. (1978). *The Prophetic Imagination*. Fortress Press, Minneapolis.

Brueggemann's account of the prophetic tradition as the deliberate maintenance of tension between what is and what is promised. This "prophetic maintenance of dissonance" is structurally equivalent to my account of the necessary role of crisis as the precondition for phase inversion.

Cahill, T. (1998). *The Gifts of the Jews*. Nan A. Talese/Anchor Books.

Accessible treatment of the Hebrew Bible's revolutionary contribution: the introduction of irreversible, forward-moving temporality into a world of cyclical cosmologies. Directly relevant to my identification of the biblical covenant structure as helical rather than circular.

Barth, K. (1956). *Church Dogmatics*, Vol. IV/1: "The Doctrine of Reconciliation." T&T Clark, Edinburgh.

Barth's *Bruch* (rupture) theology of grace — the insistence that divine reconciliation is a discrete event breaking into human history from outside, not an immanent development from within — is the most rigorous systematic-theological parallel to my account of phase inversion as a discrete topological event.

Lewis, C.S. (1947). *Miracles: A Preliminary Study*. Geoffrey Bles, London.

Lewis's philosophical argument that prior ontological commitments determine not merely how evidence is interpreted but what can count as evidence at all. This is the theological parallel to the double-cover property in my model: two identically configured observers encounter the same external signal and decode it differently because their internal states differ.

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